# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/323,767 | 06/01/1999 | DEREK MCAULEY | 1018.008US1 | 9618 |

26119        7590        04/16/2004

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| EXAMINER |
|---|
| NGUYEN, HANH N |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2662 | |

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | | Applicant(s) |
|---|---|---|---|
| **Office Action Summary** | 09/323,767 | | MCAULEY ET AL. |
| | **Examiner** | | **Art Unit** |
| | Hanh Nguyen | | 2662 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *Amendment filed on 01/26/04* .

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-3,5-16 and 18-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-16 and 18-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All  b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Claim Objections*

Claim 11 is objected to because of the following informalities:

Claim 11, line 2, it is not clear what is meant by **"the lat"**. Appropriate correction is

required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5-7, 9-12, 15, 24, 27, 29, 33, 34, 36-41 and 43 are rejected under 35 USC

103(a) as being unpatentable over **Abe et al.** (US Pat. No. 6,512,745 B1) in view of **Newman**

(US Pat. No. 5,457,687).

In claims 1, 12, 24, 29 and 41, **Abe** discloses, in Fig., an IP access network A (source

protocol layer) transmits Ip packets over ATM network 100 (via a network) to IP access

network C ( destination layer) via route R2( at least one channel). When route R2 is congested,

network management 200 (see Fig.1, a policy machanism) receives a congestion information,

and switch the packet transmission from route R2 to route R6 ( determining at least one channel

other than the congested channel for decreased packet transmission). See col.5, lines 15-20 &

col.10, lines 30-45. Now, refer to Fig.23, route R6 ( the channel other the congested channel)

has a bandwidth (10Mbits/s) lower than that (20 Mbit/s) of route R2 ( the congested channel).

Hence, the rate of transmission (10Mbits/s) makes route R6 transmits less packets than route R2 does because the bandwidth of R6 is less than the bandwidth of R2. **Abe** does not disclose the congestion information received at the network management is an ECN ( explicit congestion notification) signal caused by congestion. **Newman** discloses when a virtual channel in the ATM network is congested, a congestion signal in a form of BECN ( backward explicit congestion notification) is transmitted back to the source of the channel currently submitting traffic (signal indicative of ECN event caused by congestion). See Abstract.

Therefore, it would have been obvious to one ordinary skill in the art to modify the network of **Abe et al.** by transmitting congestion signal in a form of explicit congestion notification (ECN) to the source so that the network management unit switches the congested route to another non-congested route and transmit less packet to the destination. The motivation is to reduce congestion in a network.

In claims 6, 9, 10 and 11, the limitations of these claims have been addressed in claim 1.

In claims 33, 36, 37 and 38, the limitations of these claims have been addressed in claim 29.

In claim 27, the limitation of this claim has been addressed in claim 24.

In claim 5, the limitation of this claim has been addressed in claim 1.

In claim 15, **Abe et al.** disclose, in Fig.1, a network management equipment 200 ( a policy mechanism) connects to nodes N1-N3 and edge nodes EA, EB, EC, ED via thin lines (policy mechanism is resides at the network). See col.5, lines 5-15.

In claim 43, **Abe et al.** disclose, in Fig.4, the network management 200 ( policy

mechanism) comprising data storage device 401 ( at least one queue) and data analyzing module

405 (a filter). See col.5, lines 45-55.

In claims 7, 34, 39 and 40, the limitations of these claims have been addressed inclaims 1,

12, 29 and 41.

Claims 16, 18, 19, 20 and 21 are rejected under 35 USC 103(a) as being unpatentable

over **Abe et al.** (US Pat. No. 6,512,745 B1) in view of **Newman** (US Pat. No. 5,457,687), and

further in view of **Purcell et al.** (US Pat. No. 6,389,555 B2).

In claims 16 and 20, **Abe et al.** does not disclose the policy mechanism resides at the

source; and at the destination.. **Purcell et al.** discloses a processor 10A ( a source) comprising a

fail-over management 20a (a policy mechanism) ( a source comprises a policy mechanism). A

processor 10B comprises fail-over management 20B (a destination comprises a policy

mechanism) The fail-over management 20a switches to backup link 12B when the primary link

12A fails. See col.5, lines 2-25. Therefore, it would have been obvious to one ordinary skill in

the art to locate the network management 200 ( policy mechanism) in either the network or the

access network A ( the source) or the access network C ( the destination) by using the teaching

of **Purcell et al.** . The motivation is to detect the congestion in the network and select another

non-congest channel to transmit data packet.

In claims 18, 19 and 21, the limitations of these claims have been addressed in claim 12.

Claims 3, 13, 14, 25, 26 and 31 are rejected under 35 USC 103(a) as being unpatentable

over **Abe et al.** (US Pat. No. 6,512,745 B1) in view of **Newman** (US Pat. No. 5,457,687), and

further in view of **Hadi Salim et al.** (US Pat. No. 6,625,118 B1).

In claims 3, 13, 14, 25, 26 and 31, **Abe et al.** does not disclose the the network comprises

Internet. **Hadi Salim et al.** discloses, in Fig.1, source TCP/IP 10 ( source IP protocol layer)

transmitting data packet across IP network ( internet) to TCP/IP20 (destination IP protocol

layer). See col.5, lines 25-35.

Claims 2, 22, 23, 28, 42 and 43 are rejected under 35 USC 103(a) as being unpatentable

over **Abe et al.**(US Pat. No. 6,512,745 B1) in view of **Newman** (US Pat. No. 5,457,687), and

further in view of **Odlyzko** (US Pat. No. 6,295,294 B1).

In claims 2, 22, 23, 28 and 42, **Chuah** does not disclose a pricing criteria applied to

channels. **Odlyzko** discloses a network is partitioned into logical channels and each user incurs

a cost for use of each selected logical channel. The QOS of channels is different with respect to

the cost of user. Lower cost channels carry more traffic ( more congested) and Highest cost

channels carry least traffic (least congested). See Fig.2B & Abstract. Therefore, it would have

been obvious to one ordinary skill in the art to combine the teaching of **Odlyzko** with that of

**Abet et al.** by selecting a channel with low cost to transmit less packets to destination.

### Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-16 and 18-43 have been considered

but are moot in view of the new ground(s) of rejection.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Rubino et al. (US Pat. No. 6,424,629 B1) discloses Expediting Reconvergence in a

Routing Device.

Packer et al. (US Pat. No. 6,456,630 B1) discloses Method and Data Rate Control for

Heterogenous or Peer Internetworking.

Jabbarnezhad (US Pat. No. 6,388,988 B1) discloses Method and System for Automatic

Line Protection Switching of Embedded Channels.

Ikeda (US Pat. No. 5,719,853) discloses Congestion Control Method in an ATM Network

Based on Threshold Values of Nodes Queue Length.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The

examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can

also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou, can be reached on 703 305 4744. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR
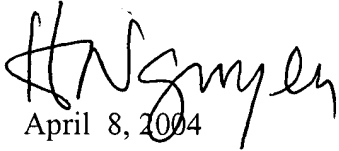
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

April 8, 2004